

Title: Development of capillary electrophoretic method for determination of phosphorylated components of bacterial cell membranes

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Abstract: The bachelor work reviews the present state of knowledge of the analyses and determination of phosphorylated compounds present in the bacterial cell membranes. This group of compounds is represented mainly by phosphatidylglycerol, cardiolipine, and phosphatidylethanolamine and minority phosphatidylserine, phosphatidic acid and lysylphosphatidylglycerol. Together with fatty acids these substances are the main components of cell membranes and they could be, to a certain degree, applied to either identification of bacteria or the study of bacterial behaviour at different conditions. Partially or fully non-aqueous capillary electrophoresis analytical method with spectrophotometric detection would be developed for their determination. Optimum experimental conditions for the separation of standards of selected compounds should be found within the framework of the bachelor thesis.

Keywords: phosphorylated compounds, bacterial cytoplasmic membrane, capillary electrophoresis, thin layer chromatography, *Bacillus subtilis*.